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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,639	07/27/2004	David R. Hall	66.0066	4638
38046	7590	05/10/2006	EXAMINER	
JEFFREY E. DALY INTELLISERV, INC 400 N. SAM HOUSTON PARKWAY EAST SUITE 900 HOUSTON, TX 77060			FULLER, ROBERT EDWARD	
			ART UNIT	PAPER NUMBER
			3672	
DATE MAILED: 05/10/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/710,639	HALL ET AL.	
	Examiner	Art Unit	
	Robert E. Fuller	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01/16/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
It was not executed in accordance with either 37 CFR 1.66 or 1.68.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 24d. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "24a" and "24b" have both been used to designate the first transmission element. Corrected drawing sheets in compliance with 37 CFR

1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "24b" and "24c" have both been used to designate the second transmission element. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claim 5 is objected to because of the following informalities: Claim 5 is not constructed as a proper Markush claim. For the purposes of examination, the examiner

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assumes that the claim is written as –The apparatus of claim 1, wherein the biasing element is selected from the group consisting of an elastomeric material, a spring, and compressed gas.-- Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3-5, and 8-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Fontenot (US 3,518,609).

Fontenot discloses a device for providing a section of drill pipe with a transmission line. Fontenot teaches the following features:

- a. An insert (The ring shown in figure 2) for insertion into the box end (13) and the pin end (15) of a section (11 and 12) of drill pipe, wherein the insert comprises a mount portion (41) and a slide portion (43);
- b. A transmission element (51) mounted in the slide portion;
- c. A biasing element (47) for effecting a bias between the mount portion and the slide portion.
- d. A channel (Figure 3) traveling through the slide portion (43) to accommodate a transmission line (45). Examiner notes that the transmission line is actually a pin (45) made of electrically conductive material (column 3, line 75). The transmission line would naturally flex as the slide portion moves with

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respect to the mount portion, as all materials exhibit some degree of flex when operated on by outside forces.

e. The biasing element (47) is a spring.

f. A stop mechanism (31) adapted to prevent the slide portion from sliding more than a specified distance with respect to the mount portion.

g. A pin end insert (41a) comprising a first transmission element (51a), wherein the pin end insert is insertable into the pin end (15) of a section of drill pipe (12); and a box end insert (41) comprising a second transmission element (51), wherein the box end insert is insertable into the box end (13) of a section of drill pipe (11).

h. The pin end insert and the box end insert further comprise a mount portion (41 and 41a) and a slide portion (43 and 43a).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
9. Claims 2, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontenot in view of Hall (US 6,392,317).

Fontenot fails to disclose the following features:

- i. The insert being inserted into the inside diameter of a section of drill pipe;
- j. The slide portion being substantially cylindrical in shape; and the slide portion is characterized by an annular mating surface configured to contact a corresponding annular mating surface;
- k. The transmission element is substantially annular; and the transmission element is mounted in the annular mating surface.

Hall discloses an annular wire harness for electrical communication between sections of drill pipe. Hall further teaches an insert with an annular sliding portion (21) mounted in the annular mating surface of a mount portion (19, see Figure 1), the mount portion also being of an annular shape. The insert is located within the inner diameter of the drill pipe (see Figure 6).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the arcuate inserts of Fontenot so that they formed complete circular annuli as taught by Hall, in order to have provided more surface area for electrical contact between the adjacent transmission elements.

Furthermore, it would have been considered obvious to have placed the inserts of Fontenot within the inner diameter of the drill pipe as taught by Hall, in order to have allowed the inserts to be installed in various types of drill pipe, and in order to have

provided protection from the debris-laden drilling mud flowing up the annulus in between the drill pipe and the wellbore casing.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references further teach the state of the art with regard to inductive telemetry devices for use in drill strings.

US 3,879,097 – Oertle

US 4,605,268 – Meador

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert E. Fuller whose telephone number is 571-272-0419. The examiner can normally be reached Monday thru Friday from 8:00 AM - 5:30 PM. The examiner is normally out of the office every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

05/04/2006
REF


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SUPERVISORY PATENT EXAMINER
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